Page No.: 2

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

(Original) A method of preparing a cyclohexanone of formula (1): 1.

$$Ar^{1}SO_{2}$$

$$(1)$$

comprising:

cycloaddition of a 2-trialkylsilyloxybutadiene of formula (2a) to a vinyl derivative of formula (a) (2b):

OSiR₃

$$CH_2$$

$$Ar^2 C$$

$$SO_2-Ar^1$$
(2a)
$$(2b)$$

to form a silyl enol ether of formula (3):

$$Ar^{1}SO_{2}$$
 OSiR₃
(3)

and

(b) hydrolysis of said silyl enol ether to form the cyclohexanone of formula (1);

wherein, in formulae (1), (2a), (2b) and (3), R represents C₁₋₆ alkyl;

 Ar^1 represents C_{6-10} aryl or heteroaryl, either of which bears 0-3 substituents independently selected from halogen, CN, NO₂, CF₃, OH, OCF₃, C₁₋₄alkoxy or C₁₋₄alkyl which optionally bears a substituent selected from halogen, CN, NO₂, CF₃, OH and C₁₋₄alkoxy; and

 Ar^2 represents C_{6-10} aryl or heteroaryl, either of which bears 0-3 substituents independently selected from halogen, CN, NO₂, CF₃, OH, OCF₃, C₁₋₄alkoxy or C₁₋₄alkyl which optionally bears a substituent selected from halogen, CN, NO₂, CF₃, OH and C₁₋₄alkoxy.

Page No.: 3

2. (Original) A method according to claim 1 wherein the cycloaddition reaction between the vinyl derivative (2b) and 2-trialkylsilyloxybutadiene (2a) to form silyl enol ether (3) is carried out at 100-150°C in a hydrocarbon solvent under an inert atmosphere.

- 3. (Previously presented) A method according to claim 1 wherein hydrolysis of the silyl enol ether (3) to the cyclohexanone (1) is carried out *in situ* without isolation or further purification of the silyl enol ether.
- 4. (Original) A method according to claim 3 wherein said hydrolysis is carried out by treatment with aqueous mineral acid at $30-80\Box C$.
 - 5. (Previously presented) A method according to claim 1 wherein each R represents methyl.
- 6. (Previously presented) A method according to claim 1 wherein the vinyl derivative (2b) is prepared by reaction of a sulphone (4):

$$Ar^2-CH_2-SO_2-Ar^1$$
(4)

with N,N,N',N'-tetramethyldiaminomethane and acetic anhydride in DMF and Ar¹ and Ar² are as defined in claim 1.

7. (Currently amended) A method of preparing cis-cyclohexanepropanoic acid of formula (6)(11)

$$Ar^{2}SO_{2}$$
 (6)

Page No.: 4

comprising the steps of:

(c) reacting a cyclohexanone of formula (1)

$$Ar^{1}SO_{2}$$

$$O$$

$$O$$

with a di(C₁₋₄alkyl) cyanomethylphosphonate and base to form a cyclohexylideneacetonitrile (7):

$$Ar^{1}SO_{2}$$
 CN
(7)

(d) reducing said cyclohexylideneacetonitrile with lithium tri-sec-butylborohydride to form the corresponding cis cyclohexaneacetonitrile (8):

$$Ar^{1}SO_{2}$$

$$(8)$$

(e) sequential treatment of said *cis* cyclohexaneacetonitrile with di*iso* butylaluminium hydride and aqueous acid to form the corresponding *cis* cyclohexaneacetaldehyde (9):

$$Ar^{2}$$
 $Ar^{1}SO_{2}$
 (9)

(f) homologation of said *cis* cyclohexaneacetaldehyde to the corresponding *cis* cyclohexanepropanal (10):

Appl'n No.: 10/522,261 Case No.: T1582YP Page No.: 5

$$Ar^{1}SO_{2}$$
 CHO
$$(10)$$

and

- oxidising said cis cyclohexanepropanal to the corresponding cis cyclohexanepropanoic acid (g) (6);wherein Ar¹ and Ar² are as defined in claim 1 and "cis" refers to the stereoconfiguration of the side chain relative to the Ar¹SO₂ group.
- 8. (Original) A method according to claim 7 wherein in step (c) the C₁₋₄ alkyl groups are ethyl, the reaction is carried out in THF at 0°C or below and the base is potassium t-butoxide.
- 9. (Previously presented) A method according to claim 7 wherein the reduction in step (d) is carried out in THF at about -60°C.
- 10. (Previously presented) A method according to claim 7 wherein the homologation in step (f) is effected by reaction of the cis cyclohexaneacetaldehyde (9) with a methoxymethyltriphenylphosphonium salt and strong base, followed by hydrolysis of the resulting mixture of enol ethers with aqueous acid.
- 11. (Previously presented) A method according to claim 7 comprising the additional step of neutralising the cyclohexanepropanoic acid (6) with sodium hydroxide to form the sodium salt thereof.
- 12. (Previously presented) A method according to claim 1 wherein Ar¹ represents 4chlorophenyl, 4-trifluoromethylphenyl or 6-trifluoromethylpyridin-3-yl and Ar² represents 2,5difluorophenyl or 2,3,6-trifluorophenyl.
- 13. (Original) A method of preparing sodium cis-4-[(4-chlorophenyl)sulfonyl]-4-(2,5difluorophenyl)cyclohexanepropanoate comprising the steps of:
- (i) preparing 4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexanone by the method of claim 1 wherein Ar¹ represents 4-chlorophenyl and Ar² represents 2,5-difluorophenyl;

Page No.: 6

(ii) reacting the product of step (i) with diethyl cyanomethylphosphonate and potassium *tert*-butoxide to form [4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexylidene]-acetonitrile;

- (iii) reducing the product of step (ii) with lithium tri-*sec*-butylborohydride to form *cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexaneacetonitrile;
- (iv) reacting the product of step (iii) sequentially with di*iso*butylaluminium hydride and with aqueous acid to form *cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexanepropanal;
- (v) reacting the product of step (iv) with methoxymethyltriphenyl-phosphonium chloride and potassium *tert*-butoxide, then hydrolysing the resulting mixture of enol ethers with aqueous acid to form *cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexanepropanal;
- (vi) oxidising the product of step (v) with aqueous sodium chlorite and sulphamic acid to form *cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexanepropanoic acid; and
 - (vii) neutralising the product of step (vi) with sodium hydroxide.